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ABSTRACT

This report was written at the request of the Latino caucus of the California State Legislature and was completed as the debate surrounding Proposition 227--a measure requiring a substantial cutback in special services to limited-English-proficient (LEP) students in California public schools--was getting underway. The impetus for the report was to rebut arguments that bilingual education had failed. The task of this report is not to present all sides of the issue, but to present the best case in favor of bilingual education. It is concluded that while no single program is best for all children under all circumstances, a well-implemented bilingual program can provide outcomes at least as positive as a well-implemented English-only program, and has the added advantage of potentially providing students with a second language. The report begins with background information on California's K-12 student population and discusses the following issues: how LEP students are served; the status of the LEP teaching force; what is known about how LEP students learn; what is known about the effectiveness of instruction for LEP students; measurement issues; the cost of instruction for LEP students; parent involvement and home influence of LEP students; the current state of assessment of LEP students; and the policy implications of this research. Numerous references are appended. (Contains 40 references.) (KFT)

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Review of Research on the Instruction of Limited English Proficient Students

A Report to the California Legislature

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University of California

LINGUISTIC MINORITY RESEARCH INSTITUTE

FL 026181

REVIEW OF RESEARCH ON THE INSTRUCTION OF LIMITED ENGLISH PROFICIENT STUDENTS

A Report to the California Legislature

The University of California Linguistic Minority Research Institute
Education Policy Center

Patricia Gándara, Director

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Preface

The following report was written at the request of the Latino Caucus of the California Legislature and was completed in April of 1997 as the debate surrounding Proposition 227 was getting underway. The impetus for the report was the concern of the caucus that much of the rhetoric in the press and on the street was that "bilingual education had failed." The Caucus asked the question, "Is there research evidence that bilingual education works?" Hence, the task that was put to us was "not" to provide an accounting of studies and essays on all sides of the issue, but to essentially "present the case" for bilingual education.

We called upon many of the most distinguished researchers in the field and asked them to provide guidance in answering the question that had been posed to us. (Their names are listed at the end of the report). This report represents a synthesis of their recommendations along with some analysis of basic education data. Our essential conclusion is that while no single program is best for all children under all circumstances, a well-implemented bilingual program can provide outcomes "at least" as positive as a well-implemented English only program, and has the added advantage of potentially providing students with a second language --a considerable asset. It is only fair to note that had we been challenged to provide all sides of the debate, our conclusions would not have differed greatly, given that they are based on a considered analysis of the best empirical data we have been able to locate in the literature.

Patricia Gándara
January, 1999

Executive Summary

Background

- 25% of California's K-12 is limited English proficient.
- 80% of these students speak Spanish; 88% speak one of four languages.

I. How LEP students are served

- 30% are in a bilingual program, however this does not necessarily mean they have a bilingual teacher.
- 70% receive no formal primary language instruction in academics.
- Between 20 and 25% of LEP students receive no special services at all and low academic performance dropping out have been shown to be alarmingly high for LEP students who do not receive services.

II. Status of the LEP teaching force

- In the decade since the sunset of the Bilingual Education Act, the ratio of bilingual teachers to LEP students has slipped from 1:70 in 1986 to 1:98 in 1996.
- Market forces drove up the numbers of teachers qualified to work with LEP students in English-only settings a dramatic 30% between 1995 and 1996.

III. What is known about how LEP students learn

- At about the 3rd grade, LEP listening skills in English are at about 80% of native proficiency, but reading and writing skills in English are still below 50% of native proficiency; not until after 5th grade do these skills begin to merge for most students.
- Primary language instruction does not impede acquisition of English, and may even confer certain cognitive advantages.
- Additional "time on task" in English instruction is only likely to increase learning of English when both of the following conditions are met: (1) the student is *actively engaged* in the learning; and (2) lessons are spaced and not continuous. (ELD instruction generally meets these criteria).
- Students with a strong background in their home language are more likely to develop high levels of English proficiency than those who do not have such an advantage.
- Awareness of the phonemic structure of one's native language is a significant predictor of early reading acquisition in English.
- Parents of LEP children can best develop their children's academic strengths by introducing them to reading and writing in the language the parents know best.

IV. What is known about the effectiveness of instruction for LEP students

- Large-scale evaluation studies are of limited usefulness in knowing how to instruct LEP students.
- When curriculum is well taught, content presented in the primary language transfers to English as students develop their English language skills.
- Primary language instruction offers certain benefits to students in terms of producing bilingual outcomes, and does not impede the acquisition of oral English.
- English reading and writing skills are the last in a hierarchy of skills to be developed by LEP students, and may require many years to reach native English levels of proficiency. In studies of fewer than 5 years, parity with native English speakers is not likely to be found.
- A program's effectiveness is dependent on more than just the quality of instruction. Other important factors are: (1) economic opportunity in the region; (2) stability of the community; and (3) opportunities for exposure to English in the general environment.

V. Measurement issues

- No program for LEP students has been shown to consistently close the gap between the performance of native English speakers and LEP students on tests of English reading in the primary grades. One major reason for this is that native English speakers begin school with such an advantage that LEP students must *outperform* the native English speakers for a period of several years in order to close the gap. Few programs for LEP students provide this opportunity for accelerated learning.
- Because the 50th percentile on tests of English reading is a commonly agreed upon objective, indicating "average" performance, LEP students, independent of their *absolute performance* on the test will find it almost impossible to achieve this percentile level --it would mean that they would have to perform better than half of all native English speaking children on whom the tests are normed. Establishing a high academic standard for LEP students is a more reasonable way to assess academic achievement than percentile measurement.

VI. Cost of instruction for LEP students

- Two major studies have come to the same conclusion about the costs of educating LEP students: the most cost-effective method is the self-contained bilingual classroom because it does not require additional staffing resources.

VII. Parent Involvement and Home Influence

- When children are required to quickly transition to English-only, this commonly results in disruption

of the parent-child relationship, loss of parental authority, and the parents' loss of ability to support schooling. This can result in increased delinquency and alienation.

- In California, and in the nation, immigrant students who maintain their native language academically outperform those immigrant students who are English-only speakers.

VIII. The state of assessment of LEP students

- Current assessment strategies are piecemeal and serve neither the purpose of accountability, nor the needs of teachers to know how their students are learning.
- There are no good data on the academic performance of LEP students, at any level or in any subject area.
- Schools serving LEP students typically lack the time and resources to collect consistent assessment data on LEP students.
- Many school districts lack the infrastructure to collect, analyze, and interpret test data that are collected.

IX. Policy Implications of the Research

A. California needs to redouble its efforts, and send the appropriate "market signals" to recruit, train, and retain a sufficient corps of bilingual teachers to provide the option of primary language instruction for all students of major language groups who can benefit from the program. Specific recommendations are found on pages 18-19.

B. LEP students should be included in the fabric of the state's assessment system for all students and held to the same high standards as all students. This system should include the development of benchmarks for English language acquisition which are sensitive to the strategies used in LEP programs in the state as well as evidence of opportunity to learn the material on which students are tested. Specific recommendations are found on pages 20-21.

C. A unit should be established within the California Department of Education to gather information, provide technical assistance, and act on behalf of the welfare of English Language Learners. Specific recommendations are found on page 21.

Introduction

This document is the result of a collaboration of many noted researchers in the field of second language education (their names are attached) under the auspices of the Education Policy Center of the UC Linguistic Minority Research Institute. The task assigned to us by members of the California Legislature was to draw together existing knowledge on the education of Limited English Proficient students (also referred to as English Language Learners) as it could apply to education policy for the state. What follows is not an exhaustive compendium of studies done in this area; rather it is a synthesis of carefully selected research that a broad group of researchers agreed was scrupulously conducted and which yielded specific, policy-relevant findings. Large-scale evaluation studies are not included because they are fraught with methodological problems that limit their policy relevance. Theoretical models and polemical essays that are unsupported by data are likewise omitted from this synthesis. We have attempted to stay close to the data, and not over-interpret the findings. Nonetheless, in the final sections of the document we do suggest policy directions for the state of California based on the review of the research we have submitted.

Background

The numbers of English Language Learners (ELLs) in California schools have increased at a rate much higher than predicted even a few short years ago. Now, one of every four students in our K-12 schools is an English Language Learner, and an estimated 40% of all students in the kindergarten and first grade are learning English as a second language. This represents a major challenge for schools and teachers and requires that, if educational reforms are to be effective in California, they must include ELLs within the fabric of those reforms.

While the challenge to educate these Limited English Proficient students is significant, it is not as daunting as sometimes suggested. Although many languages are represented in California's classrooms, almost 80% of these students speak a single language --Spanish. Another 8 percent of these students speak Cantonese, Vietnamese, or Hmong as their primary language. Moreover, much progress has been made in recent years to develop the materials and infrastructure to deliver instruction to Limited English Proficient (LEP)/ELL[1] students, and a growing research base now provides significant guidance in this regard.

I. How are Limited English Proficient Students currently being served in California?

A continuum of services is offered in California's schools: from self-contained programs in which English language development (ELD) occurs alongside instruction in academic subjects presented in the primary language, to no services at all.

Approximately 30% of LEP students are taught in classrooms with primary language instruction in

academic subjects and English language development --or what most people would refer to as bilingual classrooms. Even within these classrooms, however, instruction may vary greatly from one school to another, and from one community to another. Moreover, all bilingual classrooms are not headed by credentialed bilingual teachers. In 1996, more than one-third of teachers in bilingual classrooms were not fully credentialed, and while little is actually known about these teachers, the likelihood is that many were relying heavily on one of the 29,000 bilingual paraprofessionals employed in California's schools.

Seventy percent (70%) of LEP students are educated in English-only classrooms without academic instruction in the primary language. Of these, about 20% may receive some *informal* help in their primary language principally from an instructional aide to help decipher a lesson that is taught in English.

Among the above 70% of LEP students, more than a third receive SDAIE (Specially Designed Academic Instruction in English), which was initially designed to be a transitional pedagogy for students from a bilingual setting who were being mainstreamed into English-only classes.[2] However, in actual practice this instructional methodology is commonly used for any student who does not receive primary language instruction. Because SDAIE methods were developed for students at the threshold of English fluency, it may be inappropriate to use these same methods with students who have little or no understanding of English[3]. Moreover, Aida Walqui, instructor in the Teacher Education program at Stanford University, and an acknowledged expert in SDAIE instruction, notes that "what teachers actually do varies from classroom to classroom and we have no evidence to indicate that what they are doing is actually SDAIE. Furthermore, there are no evaluation studies of SDAIE programs in actual practice."[4]

Between 20 and 25 percent of LEP students[5] receive no services at all to support their language and academic needs. These students are mainstreamed into the regular English-only classrooms in a "sink or swim" approach. The evidence suggests that many of these students sink.[6]

In sum, only a minority of LEP students in California is currently enrolled in a bilingual program; 70% of California's LEP students receive some other kind of instructional program, or no services at all. Moreover, because LEP students tend to be more mobile than other California students, they are likely to experience several different kinds of programs over the span of their K-12 education.[7] The consequences of such a hodgepodge approach to educating English language learners can be severe. A recent study by the Council of Chief State School Officers noted that many LEP students in California, and elsewhere, do not receive the services they need and as a result these students are more likely to be held back, tracked in low academic groupings, or even placed in special education classes, and their dropout rates are alarmingly high.[8]

What is clear from the foregoing discussion is that neither the successes nor the failures of Limited English Proficient students can be attributed to their participation in bilingual education classrooms. Since so few of these students have ever received this mode of instruction and even fewer have been in such

programs for a sufficiently long period of time to assess their effectiveness.

II. Status of the Teaching Force

An oft-cited impediment to the expansion of programs that incorporate primary language instruction is the shortage of teachers who are qualified to teach using the primary language. This is not without basis: in 1986 the ratio of credentialed bilingual teachers to LEP students was 1:70, in 1996 it was 1:98, suggesting that since the sunseting of California's Bilingual Education Act in 1987, the ratio of credentialed bilingual teachers to LEP students has declined by nearly one-third. However, California has made dramatic progress in recent years in meeting the teacher needs for English Language Learners. In one year alone, the state saw an increase of 30% in the numbers of teachers trained to work with LEP students: from 15,806 in 1995 to 20,670 in 1996.* This has been due largely to the expansion of the CLAD (Cross-cultural, Language, and Academic Development) credential and certificate, which provide training in cultural diversity and instructional methods for teaching limited English proficient students as well as other programs that provide similar types of instruction to already credentialed teachers.

As of January 1997, there were 55 multiple subject (K-8) and 48 single subject (9-12) CLAD Emphasis credential programs in California. Moreover, there were 40 multiple subject and 48 single subject B/CLAD Emphasis (the bilingual specialization of the CLAD) programs training bilingual teachers. There were also 24 district and university internship programs organized around the CLAD and/or B/CLAD Emphasis credential or certificate. The growth in such programs is due largely to market forces. Many school districts will only hire teachers with training in language acquisition, cultural diversity, and second language instructional methodologies.

In addition to the B/CLAD program, two very promising program models have been established across the state to increase the numbers of bilingual teachers as well. These models should be studied for possible replication:

The Latino Teacher Project developed in 1991 at the University of Southern California, taps into the paraprofessional and teaching assistant workforce and structures a program through which they earn their bilingual teaching credential (Genzuk & Hentschke, 1992). Up to 75 students can participate each year, and the attrition rate for students in the program has been extremely low--2.7%.

The Bilingual Teacher Training Program (BTTP) is funded by the state of California and administered at 13 centers statewide. It focuses on skill development for teachers who already have their credentials but who have not been trained to work with LEP students. The BTTP trained almost 16,000 teachers last year in bilingual and ESL instructional methods, culturally responsive pedagogy, and language study courses.

Last year nearly half of the 5,000 teacher candidates who tested to qualify for the CLAD or BCLAD certificate had participated in a BTTP program. The program reports that teachers who apply for a specific course often "scale up" their aspirations to continue study for a CLAD or BCLAD certificate.

One disturbing trend, however, has been the growth in classrooms that purport to use SDAIE methods, but in which it is difficult to determine what, if any, training or competencies the teachers have who deliver the curriculum. Because many SDAIE methods are based on sound pedagogy for *all* students, it could be easy to draw the erroneous conclusion that the method is nothing more than "common sense." Experts in this area, however, contend that extensive training is required to apply the techniques appropriately to English Language Learners, and that a prerequisite to effective SDAIE instruction is primary language literacy on the part of the teacher. [10] As such, training a teacher to appropriately and effectively use SDAIE teaching methods is not a short-cut alternative to preparing teachers to work with ELL students, [11] and may even be a more costly alternative than bilingual education for school districts to implement.

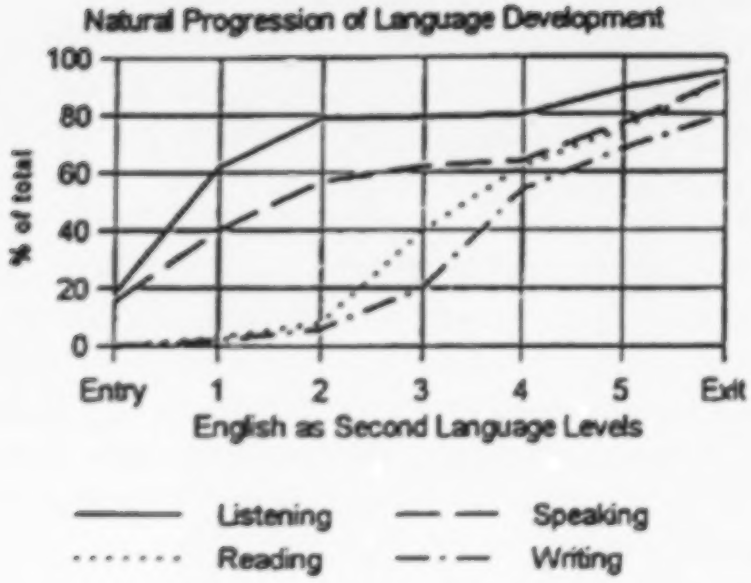
In sum, while there remains a substantial shortfall in the numbers of bilingual teachers needed, an estimated 21,000,[12] much progress has been made in recent years to train non-bilingual teachers in methods for instructing LEP students. However, to increase primary language instructional options for students, more bilingual teachers will have to be credentialed.

III. What do we know from the research about how Limited English Proficient students learn?

A. Normal Acquisition of Second Language Skills

In a recent study by De Avila, [13] incorporating data from a number of other studies, the author demonstrates expected levels of progression in acquiring English language skills for students entering school with no proficiency in English (see Figure 1).

Figure I.



Important to note from Figure 1is the large discrepancy between oral second language skills and reading and writing second language skills in the early grades. For example, while listening skills are at 80% of native proficiency by level 3 (approximately 3rd grade), reading and writing skills remain below 50% of those expected for native speakers. It is not until after Level 5 (or approximately 5th grade) that the different sets of skills begin to merge. This suggests that while a student may be able to speak and understand English at fairly high levels of proficiency within the first three years of school, academic skills in English reading and writing take longer for students to develop. This finding has significant implications for LEP students. While some students are sufficiently fluent in English to participate in many classroom activities, it would be unreasonable to expect these students to perform academic tasks involving reading and writing in English at the same level as native English speakers until they have had sufficient time to develop these skills. It is important to keep in mind that both developmental and instructional variables interact to produce academic outcomes; no amount of even high quality instruction can overcome developmental patterns.[14]

B. Major Arguments Against Primary Language Instruction

Instruction in the primary language during this period of English language development can fill the gap between students' English ability and their cognitive capacity to learn academic content. Arguments against such a strategy, however, commonly take two themes:

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(1) Instruction in two languages overburdens the finite cognitive capacity of the student and competes for limited mental resources;

(2) "Time on task" in English is the best predictor of English learning (Rossell & Baker, 1996).[15]

Both of these arguments have been discounted by cognitive research. A large body of research now demonstrates that the simultaneous learning of two languages in no way impedes cognitive development, and in fact, as the National Research Council (1997) notes:

> *"bilingualism shows no negative effects on the overall linguistic, cognitive, or social development of children, and may even provide general advantages in these areas of mental functioning (p.28)."*[16]

With respect to "time on task," the argument that is often made suggests that the more time a student spends in English language activities, the faster the child will learn the language.[17] While seemingly logical, in fact, this is not the case. Numerous studies in cognitive and educational psychology have demonstrated two critical variables in the time and learning equation. First, only additional time devoted to "***engaged***" learning results in increased achievement.[18] That is, in order for instruction to be effective, students must be attending to and participating in the instruction, not simply being "exposed" to it. Second, learning is subject to a spacing effect, such that students learn best when instruction is chunked into meaningful units, spaced over longer periods, and when the instructional format is varied.[19] A recent study of vocabulary learning underscores this point--across various conditions. It was demonstrated that students learn more word meanings when the lessons were spaced rather than when they were presented continuously.[20] Learning in a second language requires intense concentration. Extending the exposure to English over long periods at a single session does not result in increased English acquisition if the student is not engaged in the learning, and for LEP students it is difficult to remain engaged for any period of time in the absence of meaningful linguistic interaction. Extending such lessons over longer periods of time may result in just the opposite outcome --attention overload and subsequent failure to learn. In a review of research on second language acquisition, Courtney Cazden, Professor of Education at Harvard University notes, "the most obvious implication is that the amount of time spent using a second language in school can no longer be considered the most important influence on it."[21]

C. Building on Children's Existing Linguistic Skills

The National Research Council (NRC) has just released the most comprehensive report to date on the state of research on language minority students. The report is entitled Improving Schooling for Language Minority Children.[22] A number of findings detailed in the report are relevant to the policy

situation that California now faces. The NRC (1997) has also noted that the degree of children's native language proficiency is a strong predictor of their English language development. That is, students with a strong background in their home language are likely to develop higher levels of proficiency in English opposed to students who do not have such a primary language advantage. This conclusion is based on important theoretical and empirical developments in the study of second language acquisition that the National Research Council, upon review, deemed a "cumulative progression" in our understanding of this phenomenon, and "worthy of praise on its scientific merits."

Given that children who have well developed language skills *in whatever language* are more apt to encounter academic success in English, this begs the question of the most appropriate early learning experiences for limited English proficient children. It is sometimes suggested that LEP students should be immersed in English as early as possible, in preschool and kindergarten, before undertaking formal instruction in school. The logic behind this suggestion is that the students could acquire a facility in English more rapidly and thereby not delay the introduction of English language instruction in academics. On its face, this suggestion has a decided appeal. However, research on early second language acquisition cautions against an overly zealous commitment to this approach.

The National Research Council (1997) concluded "that use of the child's native language does not impede the acquisition of English." Moreover, research by Genesee (1993) finds that awareness of the phonemic structure of one's native language is a significant and positive predictor of early reading acquisition in English. The implications are that children (and their parents) who speak languages other than English during the pre-school years should be encouraged to continue to develop their native language to the fullest extent possible to take advantage of positive transfer between first and second language development. Parents who seek to "jump start" their children's acquisition of English by giving them an early exposure to it during the pre-school years may unwittingly short circuit these potential advantages; this is particularly likely in the case of parents who themselves are not fully proficient and literate in English. In contrast to the notion that parents of non-English speaking children should use English with their children in order to facilitate their acquisition of English, these findings indicate that parents should be encouraged to develop their children's skills in reading and writing in the language they know best.[23]

IV. What we know about the effectiveness of instruction of LEP students in the classroom context.

Unfortunately, an inordinate amount of attention has been focused on large scale studies that have sought to compare different program models (e.g., bilingual versus English-only programs) to determine which is best. Two studies conducted recently under the auspices of the National Research Council (Meyer & Fienberg, 1992 and August & Hakuta, 1997)[24] have concluded that "studies that compare the relative effectiveness of bilingual education with English-only programs are of very limited use in understanding the improvement of education of LEP students." Such studies typically suffer from the problem of focusing on the wrong things. While the researchers tabulate achievement scores over time for large groups of students, they miss what is actually going on in the classroom and in the school that produces the differences in student outcomes. Both NRC studies, however, conclude that, notwithstanding the serious methodological flaws in these studies, "there is a slight advantage to programs that use the native language."

The 1997 National Research Council report underscores the importance of a series of supportive schooling factors, *in addition to primary language instruction*, including:

(1) Supportive school-wide environment and leadership that is sensitive to the needs of LEP students;

(2) "Customized" learning environment that attends to the particular needs of LEP students;

(3) Coordination between and among schools;

(4) Curriculum that incorporates both basic and higher order skills, and explicit skill instruction;

(5) Opportunities for student-directed learning;

(6) Systematic student assessment;

(7) Staff development that includes attention to the needs of LEP students;

(8) Home and parent involvement in students' education.

A. *Small Scale Studies of LEP Program Effects*

Most of what we know that is actually useful for policy and practice is derived from small scale, closely controlled studies in which "the treatment" (that is, what goes on in the classroom) is carefully documented. Below, we cite several studies which researchers agree yield meaningful data.

Lindholm, et al. (1991; 1995; 1996; 1997; in press)[25]

Kathryn Lindholm of San Jose State University has amassed detailed data on bilingual immersion programs in 15 schools in California over a ten-year period. The goal of these programs is to achieve bilingual proficiency for both native English and Spanish speakers while maintaining a high level of academic achievement. Overall, Lindholm and her colleagues found that the programs worked effectively for both groups of students, and the best results were found in programs that were most faithful in their

implementation of the model. In the five studies reviewed here, both native English-speaking and native Spanish-speaking students attained oral fluency in the second language within 3 to 4 years of being in the program. Likewise, both groups achieved at the national norms, or above, when tested in Spanish. Math, social studies, and science scores were above grade level for both the native English and native Spanish speakers. Only the English reading scores showed a significant discrepancy between the two groups, with the native English speakers outperforming the native Spanish speakers throughout the primary grades. However, the researchers note that English reading was not introduced until the 3rd grade, and children from Spanish-speaking homes, where English reading was less commonly modeled, were disadvantaged in these comparisons at this early stage. Unfortunately, because of attrition in samples into the higher grades, researchers have been unable to follow a significant number of children into the sixth grade and beyond. Nonetheless, given that other subject matter skills were actively being transferred between languages, researchers assumed that reading comprehension -- among the last skills acquired by both native and second language students (See Section V) would follow the pattern already established with other academic skills. Moreover, there is no consistent evidence that any type of instructional program has been able to eradicate these differences between native English speakers and LEP students in the primary grades.[26]

Medina, et al. (1992, a & b.; 1993).[27]

The series of studies conducted by Medina and his colleagues have compared the effectiveness of transitional programs -- those programs that provide minimal primary language support -- and maintenance bilingual programs -- those that seek to maintain proficiency in the primary language while developing English--for both Spanish and Vietnamese speakers. They compared programs both in California and in Arizona. Medina's findings are similar to those of Lindholm, though he focuses on the development of oral language proficiency in two languages. As with Lindholm, he found that the attainment of oral language proficiency in English was comparable for students in programs that emphasized the primary language and those that did not. Consistent with the earlier discussion of time on task, the author notes the apparent paradox that "these 3 year [comparable] English proficiency outcomes were produced by much more instruction in English for TBE [transitional] subjects than for MBE [maintenance] participants (1992a, p.283)." Medina also found, however, that the students in the TBE program were significantly more likely to suffer primary language loss and at the end of the three years, while the MBE program yielded significantly more fully bilingual students. Hence, with respect to oral language proficiency, Medina concluded that primary language instruction in a bilingual program does not impede the development of English *oral* skills, but *does* significantly increase the probability that a student will become skilled in the use of two languages.

Samaniego and Eubank (in press)[28]

During the 1980's the California State Department of Education embarked on an interesting experiment in bilingual education. The Department oversaw what came to be known as the Case Studies Project. The program model that they sought to test out was a dual language program developed in Los Angeles City Schools. The curriculum and use of languages in the model was detailed and explicit at each grade level so that each teacher knew to what the students had been exposed at the previous grade level. The primary language was used extensively in the first three grades, with increasing use of English thereafter until students were fully mainstreamed in English in the 6th grade. However, even as English was increasingly emphasized as the language of instruction, Spanish language development continued. Students were pre-tested at the beginning of third grade and performance data were collected over the following three years.

The researchers found quite different outcomes at the four different sites studied. After three years in the program students at Eastman Avenue fared extremely well. They significantly outperformed students from the same school who had been taught in a different program; they made statistically significant growth in their English reading percentile scores over the period; and they performed above the district average for all students. The results were mixed in other communities, however. The poorest results were found at Rockwood School. In this school, students did not evidence significant growth in English

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reading, although their scores in Spanish reading and math were high -- at or above national norms. The researchers attempted to explain this discrepancy by looking at the distinctive characteristics of each community. Eastman is located in the urban center of Los Angeles. It is a stable school community with relatively low transience and a high press for English language acquisition --it is economically important to know English in this environment, and opportunities for exposure to English abound. Rockwood, on the other hand, is located near the Mexican border in a more transient area, and one in which economic opportunity does not depend on English language skills. There are few opportunities to encounter English outside of the classroom.

Researchers Samaniego and Eubank concluded, on the basis of several detailed statistical analyses of the data, that math skills had transferred across languages at a high level at all of the sites. And that most of the children were at or above national norms in math when assessed in English, in spite of the fact that most of their math instruction had occurred in the primary language. However, discrepancies in English reading scores between program sites were attributable to the interaction of the program with community variables. In order for students to achieve higher English reading scores in Rockwood, they would either have to be tested at a later point in their school careers. This after longer exposure to intensive English instruction (a recommendation that was impossible because of the heavy attrition of students at the upper grades), or English instruction in reading would have to be introduced earlier.

The researchers concluded that while the study showed clear transfer of skills from the primary language to English in subjects such as math, English reading scores were more dependent upon the community context. The stability of the community, opportunities for exposure to English, and the economic pressure to acquire English language skills. As in other studies, high levels of Spanish reading proficiency continued to be a good predictor of English language reading -- but in some sites this was likely to take longer to demonstrate.

Berman et al.[29]

A qualitative study conducted by Berman Weiler Associates at the request of the California Legislature between 1990 and 1992, reached similar conclusions with respect to community context. The BW study was charged with finding the effective elements in a range of programs serving LEP students, ranging from ESL to dual immersion bilingual programs. These researchers observed exemplary schools and classrooms serving language minority pupils and interviewed school and community personnel to assess the effectiveness of the programs within their own contexts. Using quality of staff as a partial proxy for the quality of a program, the BW study found that programs that incorporated the primary language of the students ranked highest in staff training. They "found the highest levels of teacher training across all teachers in this [bilingual] model."[30] However, it was noted that not all communities had the same level of resources or interest in supporting primary language instruction, and some schools that had eschewed the use of primary language had nonetheless mounted thoughtful and articulated programs geared to the needs of their students. This was most likely to be the case, however, where schools had high numbers of multiple language groups, and often in communities with greater resources in the home to support children's learning outside of school. It must be emphasized, moreover, that these schools were culled from among hundreds that did NOT qualify as exemplary according to the inclusion criteria for the study. As such, all schools in the study were chosen because they had taken the needs of their LEP students very seriously and had invested considerable resources in seeking strategies to meet their needs.

Summary

The studies in this review were cited by several experts in the field (see names of consultants and contributors) as carefully researched, small-scale examples of research that yielded meaningful results with clear policy implications. All of the studies scrupulously documented the nature of instruction in the classroom. Major conclusions are:

1. Primary language instruction allows LEP students to access complex academic instruction earlier than with other approaches, thereby saving valuable time and reducing the achievement gap between LEP and native English speakers;
2. When the curriculum is well taught, content presented in the primary language transfers to English as students develop their English language skills;
3. Primary language instruction offers certain benefits to students in terms of producing bilingual outcomes, and does not impede the acquisition of oral English;
4. English reading and writing skills are the last in a hierarchy of skills to be developed by LEP students and may require many years to reach native-like levels of English proficiency. In studies of less than 5 years duration, parity with native English students is not likely to be found. (However, there is a measurement issue here as well that is dealt with below in Section V);

5. Program effectiveness is dependent upon more than just the quality of instruction in the classroom. Other factors are also important, including characteristics of the community and school, economic opportunities in the region, transience level of the students, and opportunities for exposure to English in the larger environment.

V. Measurement Issues and the problem of "closing the gap"

Most evaluations of programs for LEP students seek to have the LEP students perform at the same level as native speakers of English in reading, and/or to achieve something approximating the 50th percentile on a standardized test. This is not surprising, since one of the major criticisms of programs for LEP students has been their failure to achieve parity with native English speaking students on tests of English reading. However no program model has been able to consistently achieve this aim, and there is a good reason for this. First, native English speakers arrive at school with a substantial head start in acquiring the skills that will lead to English reading. Limited English proficient students will require some time before they can "catch up" to where the native English speakers began when they entered school. In the meantime, English speakers are moving ahead in their acquisition of vocabulary, understanding of rhetorical modes, and other features of the language. Unless the LEP students are offered additional, enriched, and/or accelerated curriculum, it remains very difficult to close the gap between themselves and the native English speakers. Further exacerbating the problem is the much more extensive opportunities that native English speakers have for informal learning in their families and communities where English is the medium of communication. Theoretically, the only way to truly even the scores would be to provide more time for English language learners to engage in high quality instruction (in both content and language since the two are inextricably linked in most forms of assessment) than is provided for the native English speakers.

The second problem with this strategy is one of measurement. Standardized tests, such as those on which students are commonly tested, are designed to yield scores on a normal distribution. In order to score at the mean, a student must outperform half of the other students who took the test. It is highly unlikely that, as a group, non-native English speakers will outperform native English speaking students on tests that are dependent on language skill. The improbability that any group of non-native speakers would outscore native speakers on a language test is a characteristic of this measurement.
Another characteristic is the need for more time and extra instruction to close the gap, which almost certainly relegates the great majority of such students to the lower half of the percentile rankings, *independent of how well they are performing in an absolute sense*. Because percentiles are ranked scores, a student's absolute performance is not reflected in these measures. Rather, they tell us how a student compares to others who have taken the exam. LEP students as a group, all things being equal, will almost

always *rank* at a lower level compared to their native English speaking counterparts. Making it virtually impossible for whole classes of LEP students to achieve the sought after 50th percentile or to close the gap with English speakers in less than 5 - 7 years.[31] A different expectation would defy the statistical probabilities of the tests.

If the objective of testing is to know what students can do, a far better way to assess them is to set a high standard of performance and measure whether they meet the standard. In this way, the most important feature of the testing is to determine if students can demonstrate specific competencies rather than to simply describe their relative performance vis-a-vis each other. Such a system eschews the notion of the normal distribution and makes it *theoretically possible* for all of the students to perform at desired levels.

VII. The costs of instruction for LEP students

Two major studies have compared the costs of programs serving Limited English Proficient students (Carpenter-Huffman & Samulon, 1981 and Parrish, 1994).[32] A 1981 study conducted by the RAND Corporation was based on a nationwide sample of 60 schools. The study concluded that "bilingual programs add between $100 and $500 to the per-pupil costs of instruction," but that the actual figure was dependent upon the type of program implemented. "Pull-out instruction adds more cost than does instruction in bilingual, self-contained classrooms (1981, p. x)" because ESL approaches require the resources of more trained staff.

Based on a sample of 15 "exemplary" schools in California, Parrish (1994) concluded that less than $60 per pupil was being spent on supplementary direct instruction for LEP students, and that supplemental costs for LEP students across all program types was about $361 per pupil. He compared this expenditure to $2,402 per student spent on supplemental special education, and $875 per pupil for compensatory education programs.

Consistent with the RAND study, Parrish also found that self-contained bilingual programs were more cost effective than either sheltered English or ESL programs by a margin of nearly 20 percent.

In sum, notwithstanding the debates over appropriate methodologies for computing program costs[33] existing data on programs for English Language Learners are consistent in finding that self-contained bilingual classrooms are the most cost-effective means of delivering educational services to LEP students. This is because credentialed bilingual teachers are able to deliver all educational services to their students, without the need to rely on additional personnel to deliver separate program components.

VII. Parent Involvement and support of education among LEP families.

Numerous studies in recent years[34] have found a strong connection between student achievement

and parental involvement in their children's education. Because of this finding, virtually all school reform initiatives that have been adopted over the last decade include a parent involvement component. Of course, the importance of parent involvement is no less true for English Language Learners, and may even be more important than for other children since the home remains the child's major source of support in a "foreign" world. Traditionally, Limited English-speaking parents have been admonished to give up the use of the native language in the home and help their children to transition to English by providing English language models. Research on the acquisition of literacy, however, has soundly rejected this approach, citing instead the importance of rich literacy activities, *in any language*, as being the most significant predictor of later academic achievement, and that parents can best promote literacy in English by developing early literacy in the language they know best, usually their native language.[35]

As important as the findings on acquisition of literacy demonstrate, are the studies that have looked at the studies of the total development of the limited English proficient child. Research by Wong Fillmore (1991a & b)[36] has found that too-rapid shift to English-only for limited English proficient students (and their families) typically results in the loss of the first language and breakdown in communication between children and parents, with sometimes disastrous consequences:

(1) Parents cannot teach their children about things like ethical values, responsibility, and morality,

(2) Parents cannot provide emotional and social support children need to make the adjustments to life in a society that does not much value diversity or tolerate differences,

(3) Parents cannot tell when their children are having problems adjusting to social and academic expectations they confront at school, or when they are involved in potentially dangerous activities,

(4) Parents lose moral authority and control over their children when communication in the family breaks down.

The findings of Rumbaut (1995) and Portes & Zhou (1993),[37] in a series of studies of immigrant students in California as well as in other communities across the United States, support those of Wong Fillmore. They found that those students who maintained the home language, and thereby remained more closely allied with the culture of the parents, consistently outperformed academically those native-born children of immigrants who were fluent English speakers and who were more acculturated to American society. The researchers attributed this finding to the opportunity for those students who remain "securely ensconced in their co-ethnic community" to assimilate to American culture in a paced and selective fashion while continuing to rely on the moral resources of their own familial and ethnic ties. These researchers described native language as being an important tie that bound the students to protective features of the native culture.

VIII. The State of Assessment of LEP Students

Thirty-six states have already developed K-12 academic standards and have already or are in the process of attaching state-wide assessments to them. California is one of the minority of states that has not yet approved such standards or assessments.[38] Furthermore, because education reform is currently being driven to a large extent by the standards movement, pressure will no doubt continue from the federal level to voluntarily align state standards to enhance the ability to assess national progress in education reform. However, it is not likely that any major progress will be made in developing an assessment system for California until state-wide standards are in place. California's slow start in developing standards, nevertheless, provides the opportunity to accept the recommendations of the National Research Council to integrate LEP students into the fabric of the new standards and assessments. At the present time, our lack of an appropriate statewide assessment system means that California has very little information about how its LEP students are faring in its schools.

A study by Gándara and Merino (1994),[39] found that overall, testing of LEP students was serving neither the purposes of accountability nor the teachers' need for information about their students. They purported that the tests used were inadequate for these purposes; resources were not available to allow staff to carry out the necessary testing; and high student transience and absenteeism resulted in large gaps in testing histories. Even in this sample of "exemplary" programs for LEP students in California, only those schools that had university researchers working with them were able to collect consistent and meaningful data on student performance. Moreover, reports from the California Department of Education, Division of Compliance[40] suggest that most school district central offices do not have sufficient numbers of skilled personnel to conduct the analysis and interpretation of test data to make meaningful use of the data that are collected.

Policy Implications of the Foregoing Review

A. We conclude from the review of existing research that California must redouble its efforts to recruit, train, and retain a sufficient corps of bilingual teachers to provide the option of primary language instruction for all students of major language groups who can benefit from the program.

A summary of the review of existing research on the education of English language learners shows that primary language instruction enjoys certain advantages on a variety of dimensions. Perhaps most important, it facilitates the early introduction of complex academic instruction for LEP students, closing the achievement gap between LEP and native English-speaking students. It also has the advantage of producing bilingual individuals who hold an economic advantage in the labor market -- an advantage that is available to both native English-speaking and LEP students in dual immersion programs --, as well as in

the development of the state's economy. Moreover, a recent report by the National Research Council confirms the contention of several researchers that bilingualism may confer certain cognitive advantages on individuals who speak more than one language. Given that maintenance of primary language proficiency may foster better child-family and school-family relations, and the costs of such programs are generally less than for most other models, it must be concluded that primary language instruction should be an option available to LEP students in California. However, this option will remain elusive unless there is a strong commitment on the part of the state to support the development of a well-trained teacher corps to deliver the instruction to students. Given the declining ratio of credentialed bilingual teachers to LEP students, primary language instruction and the benefits it confers are in serious jeopardy. Inasmuch as market forces have been demonstrated to significantly stimulate the pool of teachers qualified to work with LEP students in English-only settings. It would appear that an equally dramatic effect could be achieved for the pool of bilingual teachers if school districts were to send the signal that the hiring of bilingual teachers was their highest priority.

A quarter of California's college-age students come from homes in which a language other than English is spoken, and a highly developed system of higher education, no other state in the nation, is as well positioned to recruit and train teachers adequate to the task of teaching English Language Learners. Suggestions offered to stimulate the pool of bilingual teachers include:

- Expansion of program models such as the Latino Teacher Project to tap into the pool of 29,000 bilingual paraprofessionals now working in our schools;
- Incentives in the form of stipends to encourage new bilingual college graduates to pursue a teaching credential through innovative summer and internship programs;
- Incentives to make it economically feasible for colleges and universities to provide summer intensive bilingual teacher training programs;
- Increase the pressure on the state's public colleges and universities to augment the numbers of bilingual teachers they are producing by at least 10% annually;
- Incentives to encourage credentialed bilingual teachers who have left the classroom to return. Such incentives could include both financial augmentations and increased opportunities for professional development and collaboration with other bilingual professionals.
- Identify bilingual and culturally diverse undergraduates who are interested in becoming teachers. Foster this interest and support their development through a variety of experiences including internships and school observations, throughout their college years.
- Convene a Working Group of researchers, policy makers, and practitioners who have studied the issues surrounding the development of the teacher corps for teaching LEP students under the auspices of the University of California Linguistic Minority Research Institute and the California

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B. This review leads us to conclude that LEP students should be included in the fabric of the state's assessment system for all students. Students should be held to the same high standards as all students. And this system should include the development of benchmarks for English language acquisition which are sensitive to the strategies used in LEP programs in the state as well as evidence of opportunity to learn the material on which students are tested.

The current piece-meal system of assessment that is being used in California has left the state with very little knowledge about how its LEP students are faring, or about which programs are serving these students best. Schools and districts lack the materials, testing knowledge, and resources to conduct useful assessment. They are hampered by demographic realities that are not addressed meaningfully by the state. Based on the review of existing research on both testing and conditions of LEP students, we recommend the following:

- The state move immediately to include LEP students at every level of the currently developing state academic standards, and in addition convene a group to develop standards for English language acquisition that are sensitive to the strategies being used in the LEP programs in the state.
- The state provide funding for the development of statewide assessments that are consistent with state standards and include methods for testing all LEP students to measure their progress in meeting all of the state's standards.
- New criteria be established for reclassifying students from LEP to FEP, based on specified standards, giving greater discretion to the teacher, and acknowledging that reclassification should not be tied to program exit.
- The new assessment system that is developed be tied to a systematic, ongoing staff development program that would assist teachers in improving instruction benchmarked to state standards and the developmental characteristics of LEP students.
- The state provides both funding and technical assistance to LEAs to support the collection and analysis of assessment data.
- That a coordinated database system be developed that will allow schools and districts to transfer student assessment data anywhere in the state, thereby allowing schools to better serve and track highly mobile students.
- That the Legislature convene, with the help of the University of California Linguistic Minority Research Institute and the California Policy Seminar, a working group of researchers, policy makers, and practitioners with expertise in the area of LEP testing to pursue the details of a plan for assessing California's English language learners.
- That new assessment strategies need to be developed in Spanish and possibly other languages.

C. Finally, this review leads us to conclude that there is a need for a unit within the California

Department of Education to gather information, provide technical assistance, and act on behalf of the welfare of English Language Learners.

The complex issues surrounding the education of English Language Learners are the following:

- The large numbers of LEP students in the state,
- The failure to effectively translate research on the instruction of LEP students into practice into many of California's classrooms, and
- The Department of Education's need for a special unit, adequately staffed, to address the numerous issues confronting the state and its school districts with respect to language minority pupils.
- These are among the tasks that should be urgently addressed by such an office:
- The inclusion of LEP students into the fabric of the standards now being developed for the state's K-12 schools, with additional standards specifying expected benchmarks for English language acquisition which are sensitive to the specific strategies of the state's LEP programs.
- Liaison with the Assessment unit in developing a comprehensive testing system that includes ELL students at every level, and across subject matter areas. Technical assistance to school districts in applying well-researched teaching strategies to the classroom.
- Technical assistance to school districts on the collection, use, and interpretation of data on LEP students.
- In conjunction with university researchers, coordination of small scale studies that will yield important information on the host of questions that remain to be answered about the ideal learning conditions for LEP students from different language and cultural backgrounds.
- Dissemination of information on services for LEP students and their families, and advocacy for LEP students and their needs.
- Collection and analysis of data on all aspects of LEP students and learning in California.

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[1]Limited English Proficient (LEP) and English Language Learners (ELL) are used interchangeably in the document to denote students who are not primary English speakers.

[2] Rosalia Salinas, San Diego County Schools' Director of Bilingual Education, personal communication.

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